

AsMA abstract for April 2017, Denver, CO  
Aerospace Medical Association's 2017 Annual Scientific Meeting

**PANEL: THE ADAPTABILITY RATING FOR MILITARY AVIATION (ARMA) – PAST, PRESENT, AND FUTURE**

**TITLE: Behavioral Health and Performance Operations at the NASA Johnson Space Center: A Comprehensive Program that Addresses Flight and Spaceflight Duty Adaptability**

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**PROBLEM STATEMENT:** NASA astronauts on active status require medical certification for aircraft flying duties as well as readiness for long duration spaceflight training, launch to the International Space Station (ISS), and mission continuation during spaceflight operations.

Behavioral fitness and adaptability is an inherent component of medical certification at NASA and requires a unique approach that spans the professional life-span of all active astronauts.

**TOPIC:** This presentation will address the Behavioral Health and Performance (BHP) operations program at the Johnson Space Center. Components of BHP operations include astronaut selection, as well as annual, elective, preflight, inflight, and postflight BHP assessments. Each aspect of the BHP operations program will be discussed, with a focus on behavioral fitness determination and resultant outcomes. Specifically, astronaut selection generates a rating of suitability for long duration spaceflight as well as psychiatric qualification; annual, preflight and postflight BHP assessments provoke a decision regarding the presence of any aeromedical concerns; and inflight assessment requires a conclusion pertaining to mission impact. The combination of these elements provide for a unique, comprehensive approach to flight and spaceflight adaptability.

**APPLICATIONS:** Attendees will understand the differing facets of NASA's comprehensive BHP operations program that occurs over the course of an astronaut's career and be able to compare and contrast this to the Adaptability Rating for Military Aviation (ARMA) and proposed models presented by others on this panel.

**RESOURCES:** N/A

**LEARNING OBJECTIVES:**

1. Understand NASA's need for a comprehensive and career-long BHP operations program that ensures and augments long duration spaceflight mission success.
2. Describe the different components of NASA's BHP operation's program.
3. Understand the different conclusions generated by each BHP operations event during an active astronaut's career.

**MAINTENANCE OF CERTIFICATION QUESTIONS:**

1. True or False: NASA's BHP operations program is initiated at spaceflight mission assignment.

Answer: False

2. All of the following are components of NASA's BHP operations approach, except

- a. Astronaut selection
- b. Annual BHP assessment
- c. Biofeedback and transcendental meditation
- d. Inflight BHP assessment

Answer: c

3. All of the following are potential conclusions following a NASA BHP assessment except:

- a. No mission impact
- b. No aeromedical concerns identified
- c. Long duration spaceflight suitability rating
- d. Duty not including flying (DNIF)

Answer: d